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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,980	12/31/2003	Peter John Mahon	11848/13	8999

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KENYON & KENYON
1500 K STREET NW
SUITE 700
WASHINGTON, DC 20005

EXAMINER

KALAFUT, STEPHEN J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/747,980

Applicant(s)

MAHON, PETER JOHN

Examiner

Stephen J. Kalafut

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 54-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 54-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/019,237.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>31 March 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 54-64 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims recite that the supercapacitor is connected to the electrochemical device “for compensating for changes in the one or more performance parameters”. This phrase does not appear in the specification as filed, or in the parent application, serial no. 10/019,237. The particular recited parameters, “series impedance”, “impedance that reduces the potential”, “power density” and “energy stored”, as well as any “minimum”, “predetermined value”, and how the power density is measured (gravimetric or volumetric) are also not recited.

Claim 55 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “substantially compensating” would have indefinite scope. The term is not defined in the specification. How “substantially compensating” differs from merely “compensating” is unclear.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

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improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 54 and 55 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 4 of U.S. Patent No. 6,836,097. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claim would fall within the present claims. Patented claim 1 recites, from which claim 4 depends, recites a battery with a predetermined resistance and two terminals. The battery would be an electrical device, while the resistance would be one performance parameter. Claim 1 recites a supercapacitor in parallel with the battery, and which has a predetermined series equivalent resistance, which is sufficient to limit the battery current to a maximum. This would be a type of compensating for the change in the battery resistance, a performance parameter. Claim 4 further recites a housing for the battery and the supercapacitor, which housing would also house the terminals connected to each, as is recited in present claim 54. Since the scope of

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“substantially compensating” is unclear, claim 55 would not add any details distinguishing from patented claim 4.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 54, 55 and 57-62 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagai (JP 10-294,135), cited by applicant.

Nagai discloses a device which includes a housing (25), the lower end of which form one terminal, with the upper end containing the other terminal (32). Within the housing is a battery cell (2), a type of electrochemical device, which would provide potential between the terminals. Mounted to the outside of the housing is a flexible double layer capacitor (1), which is connected to one terminal, the battery housing, via one collecting plate (15), and the other terminal via a lead (17). Thus, the electrochemical device and the capacitor are connected in parallel. While Nagai does not use the term “supercapacitor”, his term “double layer capacitor” has the same meaning. This capacitor is used to provide pulse discharge, as to accomplish the equalization of a load over time (section 0009). Thus, the capacitor compensates for a performance parameter of the battery cell, which would be the current output. Since electrochemical systems such as batteries exhibit a lowered potential upon increased current demand, the pulse discharge capability of the supercapacitor would be able to compensate for the potential reduction in the

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battery. The pulses would also enable to the supercapacitor to provide higher power density than the battery, thus compensating for the battery cell's lower power, which is the timed rate of energy output. How the power density is measured does not distinguish. Since no particular values are recited for the "predetermined minimum", this term also does not distinguish.

The disclosure is objected to because of the following informalities: On page 10, lines 8 and 10, the supercapacitor is given both the numerals 5 and 6, the latter used elsewhere. On page 14, line 21, the term "dimensi ns" appears to be missing an "o". In figure 6, two different items are numbered 42. Appropriate correction is required.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Moré (US 5,180,645) discloses supercapacitors that could function as batteries. Shiue *et al.* (US 6,500,575) disclose a metal-air battery that includes an in-cell actuating system that includes an energy converter such as a supercapacitor.

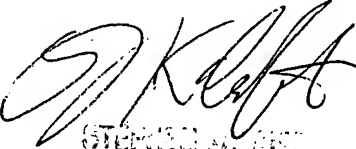
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sjk


STEPHEN A. KOFF
PRIMARY EXAMINER
GROUP 1700